



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,775	07/21/2003	Chi-Hsiang Kuo	251706-1030	6780

24504 7590 06/05/2006

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA 30339-5948

EXAMINER

LAMB, CHRISTOPHER RAY

ART UNIT PAPER NUMBER

2627

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/624,775	Applicant(s) KUO, CHI-HSIANG	
	Examiner Christopher R. Lamb	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5 and 9-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5 and 9-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 15-19 objected to because of the following informalities: minor grammatical errors. Claims 15 and 19 should read "a CD laser beam." Claims 16 and 18 should read "a DVD laser beam." Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3-5 and 9-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The use of the word "remaining" is improper, rendering the claims indefinite; the part of the claim containing the word "remaining" simply doesn't make sense.

As the Examiner best understands the Applicant's intent, by "remaining the CD laser beam" or "remaining the first laser beam" the Applicant is trying to claim that the method continues to use that laser beam to read data rather than switch beams. The following rejections have been based on that premise.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 5, 9-10, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirose (US 6,411,577).

Regarding claim 5:

Hirose discloses a method of selecting laser beam in an optical disk drive (column 1, lines 44-51), wherein either a first laser beam or a second laser beam is selected to read data from an optical disk (column 1, lines 44-51), the method comprising the steps of:

using the first laser beam to read the optical disk to generate a first testing result (column 1, line 61 to column 2, line 13);

determining if the first testing result is normal (column 8, lines 34-36);

“remaining” (that is, continuing to use) the first laser beam to read data from the optical disk if the first testing result is normal (column 8, lines 34-36; note that in Fig. 6 and Fig. 7 Hirose does not switch to the other laser unless the disk has been identified as a CD), and using the second laser beam to read data from the optical disk if the first testing result is abnormal (Fig. 6, step S22).

Regarding claim 9:

In the method of Hirose the first testing result comprises a memory capacity of the optical disk (column 1, line 61 to column 2, line 13; Hirose specifically refers to obtaining the recording density, but obtaining the recording density inherently obtains the memory capacity and vice versa).

Regarding claim 10:

In the method of Hirose the step of determining if the first testing result is normal further comprises: determining if the memory capacity is not larger than a standard memory capacity (column 8, lines 31-34).

Regarding claim 17:

In the method of Hirose the wavelength of the second laser beam is larger than the wavelength of the first laser beam (in Fig. 6, it can be seen that the 650 nm laser is operating during the density count, making it the first laser beam. The other laser beam, from the diagram, has a larger wavelength at 780 nm).

Regarding claim 18:

In Hirose the first laser beam is a DVD laser beam (that it is 650 nm is apparent from Fig. 6; in column 1, lines 26-37 that is equated to a DVD laser beam).

Regarding claim 19:

In the method of Hirose the second laser beam is a CD laser beam (that it is 780 nm is apparent from Fig. 6; in column 1, lines 26-37 that is equated to a CD laser beam).

Regarding claim 20:

In the method of Hirose the optical disk drive is capable of reading CD and DVD optical disks (column 1, lines 38-43).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-4 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose.

Regarding claim 3:

Hirose discloses a method of selecting laser beam in an optical disk drive (column 1, lines 44-51), wherein either CD laser beam or DVD laser beam is selected to read data from an optical disk (column 1, lines 30-37), the method comprising the steps of:

using the DVD laser beam to illuminate the optical disk to obtain a memory capacity of the optical disk (column 1, line 60 to column 2, line 13; Hirose specifically refers to obtaining the recording density of the optical disk, but obtaining the recording density inherently obtains the memory capacity and vice versa);

determining if the memory capacity is not larger than a standard memory capacity (column 8, lines 31-34; where again density is equivalent to capacity); and

using the CD laser beam to read data from the optical disk if the memory capacity is not larger than the standard capacity (column 8, lines 31-34), and

“remaining” (that is, continuing to use) the DVD laser beam to read data from the optical disk if the memory capacity is larger than the standard capacity (column 8, lines 34-39; note from Fig. 6 that the DVD beam remains the beam in use because the CD beam is not selected unless the disk is determined to be a CD).

The only difference between the invention as claimed and that of Hirose is that Hirose uses the DVD beam rather than the CD beam to read the memory capacity (which beam is “remaining” is an inherent consequence of the beam used to read the memory capacity; the beam used to read the memory capacity is the beam which remains the beam in use if that type of optical disk is detected).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hirose to include using a CD laser beam to illuminate the optical disk to obtain a memory capacity of the optical disk.

The motivation would have been to more quickly begin reading CDs (in column 9, lines 11-25, Hirose discloses the steps that must be implemented to switch between the DVD laser and the CD laser. The time to conduct these operations could be avoided if the CD laser beam is used to obtain the memory capacity, speeding up CD access time at the expense of DVD access time).

Regarding claim 4:

In the method of Hirose, after the step of determining if the memory capacity is not larger than the standard capacity, the method further comprises:

using the DVD laser beam to read the optical disk (Fig. 7; the DVD laser is used to look for a code on the disk) and generate a tracking error signal (in Fig. 7 the tracking servo is activated at step S16. This automatically includes generating a tracking error signal: column 6, lines 44-57) if the memory capacity is larger than the standard capacity (from Fig. 6, Fig. 7 is only reached if the memory capacity is larger than the standard);

determining if the tracking error signal is correct (column 6, lines 44-57);

and using the DVD laser beam to read data from the optical disk if the tracking error signal is correct (step S17 in Fig. 7), and ending the method if the tracking error signal is incorrect (operation is stopped if the error is generated: column 6, lines 48-50).

Regarding claim 11:

Hirose discloses a method of selecting a laser beam in an optical disk drive as discussed in the rejection of claim 10 above.

As in the rejection of claim 3 above, the roles of the CD beam and the DVD beam are reversed in Hirose with respect to this claim.

Hirose discloses wherein the second laser beam is used to read data from the optical disk if the memory capacity is not larger than the standard capacity (Fig. 6, step S22; it identifies it as a CD, so the CD laser beam is used).

Hirose does not disclose "wherein the first laser beam is used to read data from the optical disk if the memory capacity is not larger than the standard capacity."

It would have been obvious to one of ordinary skill in the art to modify Hirose to include wherein the first laser beam is used to read data from the optical disk if the memory capacity is not larger than a standard capacity.

The motivation would have been to more quickly begin reading CDs (as discussed in the rejection of claim 3 above; if the CD laser is used to obtain the memory capacity it would mean that the system would not have to be switched between lasers to read a CD after the memory capacity is obtained. Since the CD laser is used to obtain the memory capacity, it becomes the first laser in the applicant's terminology, and the first laser beam would be used to read data from the optical disk if the memory capacity is not larger than the standard capacity).

Regarding claim 12:

It is met by the modification to Hirose discussed in claim 11: the second laser beam is now the DVD laser, and thus the second laser beam is used to read data from the optical disk if the memory capacity is larger than the standard capacity (column 8, lines 34-36).

Regarding claim 13:

It is met by the modification to Hirose discussed in claim 11. Specifically, Hirose discloses wherein the step of using the second laser beam to read the optical disk, if the first testing result is abnormal (in Fig. 6, step 15, if the result is abnormal it proceeds to Fig. 7, using the DVD, or second, laser), further comprises:

Art Unit: 2627

using the second laser beam to read the optical disk and generate a second tracking error signal (the tracking servo is activated at step S16. This automatically includes generating a tracking error signal: column 6, lines 44-57);

determining if the second tracking error signal is correct (column 6, lines 44-57);

and using the second laser beam to read data from the optical disk if the second tracking error signal is correct (step S17 in Fig. 7), and ending the method if the second tracking error signal is incorrect (operation is stopped if the error is generated: column 6, lines 48-50).

Regarding claim 14:

In the modification of Hirose discussed in the rejection of claim 11, the wavelength of the second laser beam (the DVD laser beam) is smaller than the wavelength of the first laser beam (the CD laser beam; their wavelengths are given in column 1, lines 26-37).

Regarding claim 15:

In the modification of Hirose discussed in the rejection of claim 11, the first laser beam is a CD laser beam.

Regarding claim 16:

In the modification of Hirose discussed in the rejection of claim 11, the second laser beam is a DVD laser beam.

Response to Arguments

8. Applicant's arguments filed May 21st, 2006 have been fully considered but they are not persuasive.

Regarding claims 5, 9-10, and 17-20:

The Applicant makes several arguments:

- a. The Applicant's method can be used with discs other than those of Hirose.
- b. Hirose does not disclose retaining the original laser beam if the first test result is normal.
- c. Hirose's method would be confused by a "CD-like optical disk."
- d. Hirose does not disclose changing to the other laser beam if the testing result is abnormal.

Regarding (a):

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., CD-like optical discs) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding (b):

For these claims, the Examiner interprets a "normal" test result to mean the disk is identified as a DVD. In that case, Hirose retains the first laser beam (the DVD laser beam) to read from the disc, as illustrated in the flowchart of Fig. 6 and Fig. 7.

Regarding (c):

This is irrelevant, as "CD-like optical disks" are nowhere mentioned in the claim; see (a) above.

Regarding (d):

For these claims, the Examiner interprets an "abnormal" test result to mean the disk is identified as a CD. In that case, Hirose switches to the CD laser beam as illustrated in the flowchart of Fig. 8.

Regarding claims 3-4 and 11-16:

The Applicant again makes several arguments:

- e. Hirose's method is for discriminating between discs, not for selecting a laser beam.
- f. Hirose's method cannot be applied to "CD-like optical disks."
- g. Hirose's count value is not the same as the Applicant's memory capacity.
- h. Hirose's method is not as good as the Applicant's method of reading the memory capacity from the TOC.

Regarding (e):

Hirose does select a laser beam, as illustrated in Fig. 6 to Fig. 8.

Regarding (f):

This is not germane; see arguments (a) and (c) above.

Regarding (g):

Hirose's count value, used to select the laser, is a measure of the density of the disk. As the Examiner noted in the previous action, by obtaining the density Hirose has obtained the memory capacity and vice versa; if you know one, you know the other.

Regarding (h):

Again, this is irrelevant, as reading the memory capacity from the TOC is not claimed. See point (a) above. The invention as claimed requires only obtaining the memory capacity; even if Hirose's method is not as good as the Applicant's disclosed invention, it still meets the claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (572)

Art Unit: 2627

272-5264. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 5/26/06


THANG V. TRAN
PRIMARY EXAMINER